Scatter Plot: Weight vs Height for Three Groups

Aim

To create a Python program that generates a scatter plot comparing weights and heights for three different groups using sample data.

Algorithm

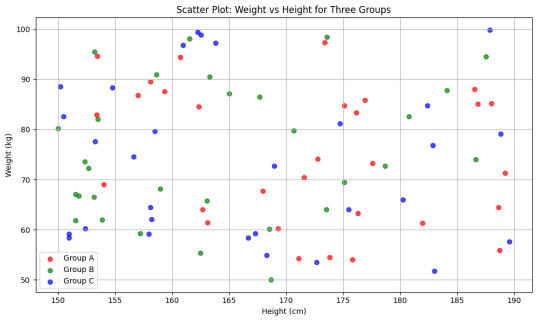
1. Import required libraries (matplotlib and random)
2. Generate sample data for three groups
3. Create a new figure and axis
4. Plot scatter points for each group with different colors
5. Set labels, title, and legend
6. Display the plot

Code

```
import matplotlib.pyplot as plt
import random

groups = ['Group A', 'Group B', 'Group C']
colors = ['red', 'green', 'blue']
plt.figure(figsize=(10, 6))
for i, group in enumerate(groups):
    heights = [random.uniform(150, 190) for _ in range(30)]
    weights = [random.uniform(50, 100) for _ in range(30)]
    plt.scatter(heights, weights, c=colors[i], label=group, alpha=0.7)
plt.xlabel('Height (cm)')
plt.ylabel('Weight (kg)')
plt.title('Scatter Plot: Weight vs Height for Three Groups')
plt.legend()
plt.grid(True)
plt.tight_layout()
plt.show()
```

Output



Result

The scatter plot visualizes the relationship between height and weight for three groups, allowing easy comparison of distributions and trends.